AMENDMENTS TO THE CLAIMS

1-15. (Cancelled).

16. (Currently amended) A method for visualizing data from a stored data set, comprising:

retrieving a plurality of data records from the stored data set, wherein each record includes a plurality of fields,

automatically detecting from the data records retrieved from the stored data set a minimum value and a maximum value for a data range for each of at least a plurality of the fields in the data records retrieved from the stored data set,

automatically assigning a display query device to each of the plurality of fields,

automatically assigning scales to the display query devices for each of the plurality of fields based on the automatically detected minimum and maximum values detected in the step of automatically detecting,

automatically assigning an order to the display query devices for each of the plurality of fields based on information in the stored data set,

displaying a graphical visualization of relationships between at least a subset of the data records retrieved from the stored data set,

displaying the display query devices in the order automatically assigned to them,

sensing adjustment by the user of one or more of the query devices, and

updating the graphical visualization based on the sensed adjustments of the query devices sensed in the step of sensing.

17. (Currently amended) The method of claim 16 wherein the step of automatically assigning a query device to each of the plurality of fields automatically assigns at least one graphical query device that responds to at least one graphical primary user input action that corresponds to a value of one of the fields and responds to at least one non-graphical, secondary user input action corresponding to a value of one of the fields.

18. (Currently amended) The method of claim 16 wherein the step of automatically assigning a query device to each of the plurality of fields automatically assigns at least one query device that includes a slider.

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19. (Currently amended) The method of claim 18 wherein ~~the step of~~ automatically assigning a query device to each of the plurality of fields automatically assigns at least one query device that includes a plurality of sliders for selecting a range of one of the fields.

20. (Cancelled).

21. (Currently amended) The method of claim 16 further including ~~the step of~~ automatically detecting a data type for at least the plurality of fields and wherein ~~the step of~~ automatically assigning a query device automatically assigns at least some of the query devices based on results of ~~the step of~~ automatically detecting a data type.

22. (Currently amended) The method of claim 21 wherein ~~the step of~~ automatically assigning a display query device automatically assigns one of a plurality of types of query device in response to ~~the step of~~ automatically detecting a data type.

23. (Currently amended) The method of claim 21 wherein ~~the step of~~ automatically detecting a data type detects field names from the <u>stored</u> data set.

24. (Currently amended) The method of claim 16 wherein ~~the step of~~ automatically assigning a display query device assigns one of a plurality of different types of query device in response to ~~the step of~~ automatically detecting a data range.

25. (Currently amended) The method of claim 16 wherein ~~the step of~~ automatically assigning a display query device assigns one of a plurality of different types of query device in response to user input.

26. (Currently amended) The method of claim 16 wherein ~~the step of~~ displaying a visualization displays a visualization that shows a relationship between an independent field and a plurality of dependent fields and further including ~~a step of~~ selecting one of the fields to assign to be the independent field.

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27. (Currently amended) The method of claim 26 wherein ~~the step of~~ selecting one of the fields to assign to be the independent field is based on user input.

28. (Currently amended) The method of claim 26 wherein ~~the step of~~ selecting one of the fields to assign to be the independent field is automatic.

29. (Previously presented) The method of claim 16 wherein the data set is stored in a database.

30. (Previously presented) The method of claim 16 wherein the data set is stored in a data set file.

31. (Currently amended) The method of claim 16 wherein the assignments made in ~~the step of~~ automatically assigning are user-changeable.

32. (Previously presented) The method of claim 16 wherein the visualization includes an X-Y plot.

33. (Previously presented) The method of claim 16 wherein the visualization includes a bar graph.

34. (Previously presented) The method of claim 16 wherein the visualization includes a pie chart.

35. (Currently amended) A system for visualizing data from a data set, comprising:
storage for the data set,
a channel to access the storage,
a user input device,
a display device, and

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a main processing system connected through the channel for communication with the stored data set in the storage, the main processing system being operative to:

retrieve a plurality of data records from the data set through the channel, wherein each record includes a plurality of fields,

automatically detect from the data records retrieved from the data set a minimum value and a maximum value for a data range for each of at least a plurality of the fields in the data records retrieved from the data set,

automatically assign a display query device to each of the plurality of fields,

automatically assign scales to the display query devices for the plurality of fields based on the minimum and maximum values,

automatically assign an order to the display query devices for each of the plurality of fields based on information in the data set,

display on the display device a graphical visualization of relationships between at least a subset of the data records retrieved from the data set,

display the display query devices in the order assigned to them,

sense adjustment by the user using of one or more of the query devices by means of the user input device, and

update the graphical visualization on the display device based on adjustments of the query devices.

36. (Currently amended) A system for visualizing data from a stored data set, comprising:

means for retrieving a plurality of data records from the stored data set, wherein each record includes a plurality of fields,

means for automatically detecting from the data records retrieved from the stored data set a minimum value and a maximum value for a data range for each of at least a plurality of the fields in the data records retrieved from the stored data set,

means for automatically assigning a display query device to each of the plurality of fields,

means for automatically assigning scales to the display query devices for each of the plurality of fields based on the minimum and maximum values detected by the means for automatically detecting,

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     means for automatically assigning an order to the display query devices for each of the plurality of fields based on information in the stored data set and for displaying the display query devices in the assigned order,

     means for displaying a graphical visualization of relationships between at least a subset of the data records retrieved from the stored data set,

     means for sensing adjustment by the user of one or more of the query devices, and

     means for updating the graphical visualization based on adjustments of the query devices sensed by the means for sensing.

     37. (Currently amended) The method of claim 16 wherein ~~the step of determining~~detecting maximum and minimum values is based on ~~a step of~~ sampling the stored data set.

     38. (Currently amended) The method of claim 21 wherein ~~the step of determining~~ detecting maximum and minimum values is based on ~~the step of~~ automatically detecting a data type.

     39. (Currently amended) The method of claim 21 wherein ~~the step of~~ automatically assigning a query device to each of the plurality of fields assigns different types of query devices to different fields based on results of ~~the step of~~ automatically detecting a data type.

     40. (Currently amended) The method of claim 39 wherein ~~the step of determining~~ detecting maximum and minimum values for the different fields is based on ~~the step of~~ automatically detecting a data type for the different fields.

     41. (Previously presented) The system of claim 35 wherein the main processing system is further operative to automatically detect a data type for the fields.

     42. (New) The method of claim 16 wherein automatically assigning an order is based on the evaluation of relationships between a field for an independent variable and a plurality of fields for dependent variables independent of a preexisting order of the fields.

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